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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/610,503

06/30/2003

J. Michael Drake

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CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

LE, JOHN H

ART UNIT

PAPER NUMBER

2863

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/610,503

Applicant(s)

DRAKE ET AL.

Examiner

John H Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-14 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/30/2003</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities:

Claim 4, line 4, before "wherein", "and and" should change to –and–.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7 and 10-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Lueschow et al. (USP 6,552,279).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Lueschow et al. disclose a method for dynamically measuring a payload weight for a machine having at least one cylinder for elevating a payload carrier, the cylinder being connected to a fluid circuit having an actuating fluid (Abstract), comprising: determining a calibration weight associated with the payload carrier (Col.4, lines 7-21); determining an uncompensated payload weight (Col.6, lines 36-52); determining a temperature gain associated with the actuating fluid in response to at least the calibration weight (e.g. Fig.6, Col.4, lines 35-44, lines 54-62, Col.8, lines 36-53) and the uncompensated payload weight (Col.7, lines 3-10); and determining the payload weight in response to at least the uncompensated payload weight and the temperature gain (Col.36-Col.7, line 10, Col.8, lines 36-53).

Regarding claim 2, Lueschow et al. disclose determining the calibration weight includes: lifting a first payload having a first payload weight; sensing a first plurality of pressure values of the actuating fluid during the lifting of the first payload; lifting a second payload having a second payload weight; and sensing a second plurality of pressure values of the actuating fluid during the lifting of the second payload (Col.5, lines 2-10, 33-40, Col.10, lines 51-58).

Regarding claim 3, Lueschow et al. disclose determining the uncompensated payload weight includes: lifting a third payload having a third payload weight; and sensing a third plurality of pressure values of the actuating fluid during the lifting of the third payload (Col.6, lines 7-35, Col.10, line 61-63).

Regarding claim 4, Lueschow et al. disclose establishing a first temperature of the actuating fluid associated with the calibration weight (Col.4,

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lines 54-63); and wherein the temperature gain associated with the actuating fluid is determined in response to at least the first temperature of the actuating fluid (Col.4, lines 35-44).

Regarding claim 5, Lueschow et al. disclose establishing a second temperature of the actuating fluid associated with the uncompensated payload weight; and wherein the payload weight is determined in response to at least the second temperature (Col.7, lines 3-10).

Regarding claim 6, Lueschow et al. disclose a method for dynamically measuring a payload weight for a machine having at least one cylinder for elevating a payload carrier, the cylinder being connected to a fluid circuit having an actuating fluid (Abstract), comprising: determining a calibration weight associated with the payload carrier (Col.4, line 63-Col.5, line 6); determining a calibration temperature of the actuating fluid associated with the calibration weight (Col.4, lines 54-62); determining an uncompensated payload weight (Col.6, lines 36-52); scaling the calibration temperature by a scaling function of the uncompensated payload weight and the calibration weight (Col.7, lines 3-17); and determining the payload weight as a function of at least the uncompensated payload weight and the scaled calibration temperature (Col.6, line 36-Col.7, line 17).

Regarding claim 7, Lueschow et al. disclose the scaling function comprises a ratio of the uncompensated payload weight to the calibration weight (Col.6, lines 50-57).

Regarding claim 10, Lueschow et al. disclose determining the calibration weight includes: lifting a first payload having a first payload weight; sensing a first plurality of pressure values of the actuating fluid during the lifting of the first payload; lifting a second payload having a second payload weight; and sensing a second plurality of pressure values of the actuating fluid during the lifting of the second payload (Col.5, lines 2-10, 33-40, Col.10, lines 51-58).

Regarding claim 11, Lueschow et al. disclose step of determining the calibration temperature includes: sensing a first lift temperature of the actuating fluid during a first lift; sensing a second lift temperature of the actuating fluid during a second lift (Col.5, lines 6-8, 35-38, 48-53); averaging the first lift temperature and the second lift temperature (Col.5, line 59-Col.6, line 6); and establishing the calibration temperature in response to the average (Col.5, line 59-Col.6, line 6).

Regarding claim 12, Lueschow et al. disclose determining the uncompensated payload weight includes: lifting an unknown payload weight (Col.6, lines 39-45); and sensing a plurality of pressure values of the actuating fluid during the lifting of the unknown payload weight (Col.6, lines 39-45).

Regarding claim 13, Lueschow et al. disclose an apparatus for dynamically measuring a payload weight for a machine having at least one cylinder for elevating a payload carrier, the cylinder being connected to a fluid circuit having an actuating fluid (Abstract), comprising: calibration means for determining a calibration weight associated with the payload carrier; temperature means (temperature sensor 25) for determining a first and second temperature of

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the actuating fluid (Col.3, lines 46-55, Col.5, lines 48-54); payload means for determining an uncompensated payload weight (Col.6, lines 37-52); and compensating means for determining the payload weight (Col.4, lines 45-58).

Regarding claim 14, Lueschow et al. disclose the compensating means comprises: scaling means for adjusting the first temperature as a function of the calibration weight and the uncompensated payload weight (Col.7, lines 3-57); and calculating means for determining the payload weight as a function of the uncompensated payload weight, the scaled temperature, and the second temperature (Col.4, lines 22-44, Col.5, lines 17-24).

Allowable Subject Matter

4. Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In combination with other limitations of the claims, the cited prior arts fails to teach steps of determining a current temperature of the actuating fluid associated with the uncompensated payload weight; and wherein the payload weight is determined as a function of at least the current temperature, as recited in claim(s) 8.

Contact Information

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H Le whose telephone number is 571-272-2275. The examiner can normally be reached on 8:00 - 4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

August 31, 2004


John Barlow
Supervisory Patent Examiner
Technology Center 2800